CLAIM AMENDMENTS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 - 24 (canceled).

Claim 25 (currently amended). A method for controlling an operation of an electronic wheel unit assigned to a vehicle wheel, which comprises the steps of:

acquiring data relating to an operating state of the vehicle wheel using [[of]] at least one state detection device;

acquiring data relating to energy instantaneously available to the electronic wheel unit from a generator and from an energy storage device using at least one energy detection device;

controlling the operation of the electronic wheel unit and thereby ~~a determined~~ controlling an energy consumption of the electronic wheel unit in dependence on the data acquired by the at least one state detection device and the at least one energy detection device with a central control unit connected to the at least one state detection device and to the at least one energy detection device; and

ensuring a functionality of the electronic wheel unit during predetermined important operating states of the vehicle wheel that at least temporarily consumes more energy than is instantaneously available from the generator; and

reducing the functionality of the electronic wheel unit during predetermined less important operating states of the vehicle wheel to a degree that the energy available from the generator is greater than the energy consumed by the electronic wheel unit, resulting in the generator charging up the energy storage device to compensate for energy previously over-consumed or to be over-consumed.

Claim 26 (currently amended). The method according to claim 25, which further comprises directly connecting the electronic wheel unit [[is]] to the energy storage device for supplying it with energy.

Claim 27 (previously presented). The method according to claim 25, which further comprises disposing the energy storage device between the generator and the electronic wheel unit.

Claim 28 (previously presented). The method according to claim 25, which further comprises forming the energy storage device with charging electronics for suitable conversion and conditioning of signals received from the generator.

Claim 29 (previously presented). The method according to claim 25, which further comprises forming the energy storage device as a device selected from the group consisting of a rechargeable battery, a capacitor, a gold cap capacitor, and a foil battery incorporated in a circuit board.

Claim 30 (previously presented). The method according to claim 25, which further comprises providing a plurality of state detection devices for acquiring the data including acceleration data, vibration data, noise data, force data, movement data, temperature data, and pressure data associated with the vehicle wheel.

Claim 31 (previously presented). The method according to claim 30, which further comprises providing a plurality of energy detection devices for detecting instantaneously available energy of the generator and an instantaneous utilization state of the energy storage device.

Claim 32 (currently amended). The method according to claim 25, which further comprises:

receiving and evaluating ~~in the central control unit the data which includes the following operating states~~ the data from the at least one state detection device and/or the at least one energy detection device; [[:]]

the data from the at least one state detection device and/or the at least one energy detection device, relating to:

a start of driving state ~~being~~ beginning at a defined time interval after moving off;

an initialization state, whereby an initialization procedure is executed on a vehicle receiver;

a localization state, whereby a localization procedure is executed on the vehicle receiver;

a risk state including a below-threshold pressure and/or an above-threshold speed of the vehicle wheel;

a danger state including a below-threshold pressure of the vehicle wheel; and

a charging state including a high available energy state at an output of the generator and a low fill level of the energy storage device state.

Claim 33 (currently amended). The method according to claim 25, wherein, ~~the central control unit controlling the following responses of the electronic wheel unit~~ in dependence on the data acquired, the central control unit controls:

a transmitting frequency of the electronic wheel unit;

a measurement frequency of the electronic wheel unit;

a repetition frequency of a radio telegram to improve transmission reliability;

an accuracy of measurements of the electronic wheel unit;

a selection of which measurements are to be performed by the electronic wheel unit;

a transition to or from a power saving mode of the electronic wheel unit;

a connection of the electronic wheel unit to the energy storage device; ~~and~~

an adaptation or selection of the transmitted data, including a reduction of the telegram to a most necessary core data for energy saving including only identifiers, pressure data and temperature data; and ~~, and without a need to save energy all the data together with calibration and manufacturing data being transmitted~~

a transmission of all data including calibration and manufacturing data in a mode where there is not a need to save energy.

Claim 34 (previously presented). The method according to claim 25, which further comprises connecting the central control unit to the electronic wheel unit via a radio link.

Claim 35 (previously presented). The method according to claim 31, which further comprises forming the plurality of state detection devices and/or the plurality of energy detection devices as passively operated sensors.

Claim 36 (previously presented). The method according to claim 25, which further comprises forming the generator as an energy transducer.

Claim 37 (currently amended). An apparatus for controlling an operation of an electronic wheel unit assigned to a vehicle wheel, the apparatus comprising:

a generator;

an energy storage device connected to said generator;

at least one state detection device for acquiring data ~~in respect of~~ relating to an operating state of the vehicle wheel;

at least one energy detection device for acquiring data ~~in respect of~~ relating to energy instantaneously available to the electronic wheel unit from said generator and from said energy storage device;

a central control unit connected to said at least one state detection device and to said at least one energy detection device for controlling the operation of the electronic wheel unit and for controlling a determined energy consumption of the electronic wheel unit in dependence on the data acquired by said at least one state detection device and said at least one energy detection device;

said central control unit ensuring a functionality of the electronic wheel unit during predetermined important operating states of the vehicle wheel which at least temporarily consume more energy than is instantaneously available from said generator and, said central control unit, during predetermined less important operating states of the vehicle wheel, reduces the functionality of the electronic wheel unit to consume less energy than the energy available from said generator resulting in said generator charging up said energy storage device to compensate for the energy previously over-consumed or to be over-consumed.

Claim 38 (previously presented). The apparatus according to claim 37, wherein the electronic wheel unit is connected directly to said energy storage device for supplying energy.

Claim 39 (previously presented). The apparatus according to claim 37, wherein said energy storage device is disposed between said generator and the electronic wheel unit.

Claim 40 (previously presented). The apparatus according to claim 37, wherein said energy storage device includes charging electronics for appropriate conversion and conditioning of signals received from said generator.

Claim 41 (previously presented). The apparatus according to claim 37, wherein said energy storage device is selected from the group consisting of a rechargeable battery, a capacitor, a gold cap capacitor, and a foil battery incorporated in a circuit board.

Claim 42 (previously presented). The apparatus according to claim 37, wherein said state detection device is one of a plurality of state detection devices for acquiring data in respect of accelerations, vibrations, noise, forces, movements, temperatures, and pressures of the vehicle wheel.

Claim 43 (currently amended). The apparatus according to claim 42, wherein said energy detection device is one of a plurality of energy detection devices for detecting an instantaneously available energy of said generator and [[a]] an instantaneous utilization state of said energy storage device.

Claim 44 (currently amended). The apparatus according to claim 37, wherein:

said central control unit receives and evaluates the data ~~in respect of the following operating states from~~ acquired by said at least one state detection device and/or said at least one energy detection device; and

the data, which is acquired by said at least one state detection device and/or said at least one energy detection device, relate to:

a start of a driving state ~~being~~ beginning at a defined time interval after moving off;

an initialization state, whereby an initialization procedure is executed on a vehicle receiver;

a localization state, whereby a localization procedure is executed on the vehicle receiver;

a risk state for a below-threshold pressure and/or an above-threshold speed of a wheel;

a danger state for a greatly below-threshold pressure of the vehicle wheel; and

a charging state including a determination of a high available energy state at an output of said generator and/or a low fill level of said energy storage device state.

Claim 45 (currently amended). The apparatus according to claim 37, wherein, in dependence on the data acquired by said at least one state detection device and/or said at least one energy detection device, said central control unit is programmed to control ~~the following responses of the electronic wheel unit in dependence on the data acquired~~:

a transmitting frequency of the electronic wheel unit;

a measurement frequency of the electronic wheel unit;

a repetition frequency of a radio telegram to improve transmission reliability;

an accuracy of measurements of the electronic wheel unit;

a selection of which measurements are to be performed by the electronic wheel unit;

a transition to or from a power saving mode of the electronic wheel unit;

a connection of the electronic wheel unit to said energy storage device; ~~and~~

an adaptation or selection of the transmitted data including reducing the telegram to a most necessary core data for energy saving, the core data including only identifiers, pressure data and temperature data; and ~~, and~~

~~whereas without a need to save energy all the data together with calibration and manufacturing data is transmitted~~ a transmission of all data including calibration and manufacturing data in a mode where there is not a need to save energy.

Claim 46 (previously presented). The apparatus according to claim 37, further comprising a radio link, said central control unit connected to the electronic wheel unit via said radio link.

Claim 47 (previously presented). The apparatus according to claim 43, wherein said plurality of state detection devices and/or said plurality of energy detection devices are passively operated sensors.

Claim 48 (previously presented). The apparatus according to claim 37, wherein said generator is an energy transducer.

DRAWING AMENDMENTS

The attached two sheets of drawings includes changes to Figs. 1 and 2. These sheets which include Figs. 1 and 2, replaces original sheets 1 and 2 including Figs. 1 and 2. In Fig. 1, the labels, wheel (4 occurrences), electronic wheel unit (4 occurrences), receiver, and control unit have been added. In Fig. 2, the label energy detection device has been added twice and one occurrence of the numeral 3 has been changed to the numeral 4.

Attachments: Two Replacement Sheets

Two Annotated Sheets Showing Changes